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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/666,528	09/19/2003	Donald McCollor	EER.P0014	5892

30163 7590 10/13/2005  
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EXAMINER

HERTZOG, ARDITH E

ART UNIT	PAPER NUMBER
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1754

DATE MAILED: 10/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/666,528

Applicant(s)

MCCOLLOR ET AL.

Examiner

Ardith E. Hertzog

Art Unit

1754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 19 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-49 are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Election/Restriction*

1. Restriction to one of the following inventions is required under 35 U.S.C. § 121:
  - Group 1.** Claims 1-19, drawn to methods of capturing gas phase pollutants in a combustion system (having an air preheater) comprising, at the least, creating a model of the combustion system, classified in class 423, subclass 210+.
  - Group 2.** Claims 20-29, drawn to a combustion system, classified in class 431, subclass 18+.
  - Group 3.** Claims 30-41, drawn to a method of capturing gas phase pollutants in a combustion system, wherein "pollutant condensation occurs primarily on... injected particles", classified in class 423, subclass 210+.
  - Group 4.** Claims 42-49, drawn to a method of capturing gas phase pollutants in a combustion system having an air preheater, wherein "size distribution of... resultant ash particles has an increased population of fine particles below 5 microns", classified in class 423, subclass 210+.
2. The inventions are distinct, each from the other, because of the following reasons:

3. The inventions of **Group 1** and **Group 2** are related as process and apparatus (system) for its practice. The inventions are distinct if it can be shown that **either**: (1) the process as claimed can be practiced by another materially different apparatus or by hand, **or** (2) the apparatus as claimed can be used to practice another and materially different process (see MPEP § 806.05(e)). In this case, the process as claimed can be practiced by another materially different apparatus, as evinced by the **Group 1** claims, wherein the **specific** apparatus of **Group 2** is not required.

4. The inventions of **Group 1** and **Group 3** are related as subcombination and combination. Inventions in this relationship are distinct if it can be shown that: (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, **and** (2) the subcombination has utility by itself or in other combinations (see MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed, because the **Group 3** method does not require the "creating a (computer) model..." and "using the (computer) model..." steps of the **Group 1** methods. The subcombination has separate utility such as, by itself, i.e., the **Group 1** methods.

5. The inventions of **Group 1** and **Group 4** are related as subcombination and combination. Inventions in this relationship are distinct if it can be shown that: (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, **and** (2) the subcombination has utility by itself or in other combinations (see MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed, because the **Group**

Art Unit: 1754

4 method does not require the “creating a (computer) model...” and “using the (computer) model...” steps of the **Group 1** methods. The subcombination has separate utility such as, by itself, i.e., the **Group 1** methods.

6. The inventions of **Group 2** and *each of Groups 3 and 4* are related as apparatus (system) and process and for its practice. The inventions are distinct if it can be shown that **either**: (1) the process as claimed can be practiced by another materially different apparatus or by hand, **or** (2) the apparatus as claimed can be used to practice another and materially different process (see MPEP § 806.05(e)). In this case, the process as claimed can be practiced by another materially different apparatus, as evinced by *both* the **Group 3 and 4** claims, wherein the **specific** apparatus of **Group 2** is not required.

7. The inventions of **Group 3** and **Group 4** are related as combination and subcombination (or, alternatively, as subcombination and combination). Inventions in this relationship are distinct if it can be shown that: (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, **and** (2) the subcombination has utility by itself or in other combinations (see MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed, because the **Group 3** method does not require the “size distribution...” limitation of the **Group 4** method, and the subcombination has separate utility such as, by itself, i.e., the **Group 4** method. (Alternatively, the combination as claimed does not require the particulars of the subcombination as claimed, because the **Group 4** method does not require the

Art Unit: 1754

"pollutant condensation..." limitation of the **Group 3** method, and the subcombination has separate utility such as, by itself, i.e., the **Group 3** method.)

8. Because these inventions are distinct for the reasons given above and the search required for **any one** of **Groups 1-4** is **not** required for any other group, and, **further** with respect to **Group 2**, have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

9. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed, per 37 CFR § 1.143.

10. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR § 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR § 1.48(b) and by the fee required under 37 CFR § 1.17(i).

### ***Conclusion***

11. Any inquiry concerning this communication should be directed to Ardith E. Hertzog at 571-272-1347. The examiner can normally be reached on Monday through Friday (from about 8:00 a.m. - 4:00 p.m.).

12. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley S. Silverman, can be reached at 571-272-1358. The central fax

Art Unit: 1754


number for all communications is now 571-273-8300.

13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. For any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



AEH

October 5, 2005



**STEVEN BOS**  
**PRIMARY EXAMINER**  
**GROUP 1100**